



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,054	02/26/2002	Kevin J. Schulz	S01.12-0829/STL 10301	4383

7590 03/28/2003

Theodore M. Magee
WESTMAN CHAMPLIN & KELLY
International Centre - Suite 1600
900 South Second Avenue
Minneapolis, MN 55402-3319

EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT	PAPER NUMBER
----------	--------------

2652

12

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,054

Applicant(s)

SCHULZ ET AL.

Examiner

William J. Klimowicz

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 8-12, 14, 17-20, 22 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 13, 15, 16, 21, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Status

Claims 1-25 are currently pending.

Claims 3-5, 8-12, 14, 17-20, 22 and 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5 (filed June 18, 2002).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 7, 13, 15, 16, 21, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pal et al. (US 4,760,478) in view of Oberg (US 4,991,045).

As per claims 1, 13, 15, 21 and 23, Pal et al. (US 4,760,478) discloses a data storage device for storing and accessing data in tracks on a medium (11), the storage device having a suspension (12) comprising: a metal material (24) defining at least a portion of the suspension (12); an adhesive (34) (*e.g.*, see COL. 4, lines 45-62) bonded to a portion of the metal material (24); and a stiffener material (36) being bonded to the adhesive and overlying the metal load beam.

Art Unit: 2652

Additionally, as per claim 21, the suspension body (12) is formed from the layer of metal (24); and stiffener means (36) for increasing the stiffness of selected areas of the suspension.

As per claim 2, the metal material defines a load beam (24) of the suspension and the adhesive (34) and the stiffener material (36) are positioned on the load beam (24).

As per claims 1, 13 and 21, however, Pal et al. (US 4,760,478) remains silent with respect to the stiffener being a composite material. More concretely, Pal et al. (US 4,760,478) discloses the stiffener material being a conventional stainless steel (*e.g.*, see COL. 6, lines 5-6).

Oberg (US 4,991,045), however, discloses an analogous suspension system used in a data storage device wherein a stiffener material provided as overlying a metal load beam is made of a composite material. Such a stiffener material (36) has a higher stiffness to weight ratio than the metal material (due to its composition, which includes a liquid crystal polymer - see COL. 4, lines 23-47) as per claims 1 and 24.

Oberg (US 4,991,045) discloses such a composite stiffener material (liquid crystal polymers, which may include fillers such as fibers).

As per claims 6 and 16, the composite material (106) comprises a high performance plastic and as per claim 7, the composite material (106) comprises a liquid crystal polymer (see COL. 4, lines 23-47).

Oberg (US 4,991,045) discloses such a composite stiffener (stiffener means) material in lieu of similar stainless steel constructions in order to provide, *inter alia*, “substantial weight savings ... which may reduce access time” (COL. 4, lines 18-22) and wherein “[t]he mechanical damping is excellent” when contrasted with conventional stainless steel materials used in similar applications. COL. 4, lines 23-32.

Art Unit: 2652

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the composite stiffener overlying the metal load beam as taught by Oberg (US 4,991,045) in lieu of the stainless steel stiffener of Pal et al. (US 4,760,478).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the composite stiffener overlying the metal load beam as taught by Oberg (US 4,991,045) in lieu of the stainless steel stiffener of Pal et al. (US 4,760,478) in order to provide, *inter alia*, “substantial weight savings ... which may reduce access time” (COL. 4, lines 18-22) and wherein “[t]he mechanical damping is excellent” when contrasted with conventional stainless steel materials used in similar applications. COL. 4, lines 23-32.

Response to Arguments

Applicants’ arguments filed February 21, 2003 (Paper No. 11) have been fully considered but they are not persuasive.

The Applicants allege that “[t]he combination of Pal and Oberg does not show or suggest the invention of claims 1, 13 or 21 because together these references do not suggest adhesively applying a composite material to a metal material on a suspension.” See page 2 of Applicants’ response. The Applicants further state “[i]n Pal, the stiffening metal piece 36 is not applied to the load beam with an adhesive. Instead, Pal teaches that a thick viscoelastic material needs to be inserted between piece 36 and load beam 24 to absorb vibrational energy. Thus, Pal does not show or suggest applying any type of stiffening member to a load beam using an adhesive but instead only suggests applying a stiffening member to a damping material.” *Id.*

Art Unit: 2652

The Examiner disagrees with the Applicants' assertion. More concretely, the Examiner notes that Pal et al. (US 4,760,478) unambiguously discloses an embodiment wherein the dampening member is used as the bonding adhesive, reciting "[t]he load beam may then be heated to a temperature sufficient to tackify the viscoelastic material so that the three components are more effectively bonded together." See COL. 4, lines 55-58. Thus the viscoelastic damping material (34) at least assists in the bonding of the constraining member (36) to the load beam (24). Moreover, it is further noted that nothing in the claims precludes the use of a damping material in assisting the bonding of the load beam and constraining member. That is, the claims are open ended, containing the word "comprising." Thus other coatings and/or damping layers which function in part as adhesives are not in any way excluded from the *claimed invention*.

Additionally, as has been widely held, during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." The Appellant always has the opportunity to amend the claims during prosecution and broad interpretation by the Examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. See *In re Prater*, 162 USPQ 541, 550 - 51 (CCPA 1969).

Furthermore, in patent law, "comprising" is open-ended word and one of enlargement, not of restriction; in contrast, "consisting" is word of restriction and exclusion.

As set forth in *Parmelee Pharmaceutical Company et al. V. Zink*, 163 USPQ 271(CA 8 1961):

The word "comprising" in the patent law is an open-ended word and one of enlargement and not of restriction. "Claim 17 includes the expression 'loose

Art Unit: 2652

granules of a natural material of the group comprising wood and grain.' The word 'comprising' does not exclude other materials besides wood and grains." *Ex parte Dotter*, 12 USPQ 382, 383-4. (d) In contrast, the word "consisting" is one of restriction and exclusion.

Similarly, as set forth in *Intermountain Research and Engineering Company, Inc., et al. V. Hercules Incorporated et al.*, 163 USPQ 390 (DC CCalif. 1969):

Claims which define compositions as "consisting essentially" of named ingredients do not embrace compositions containing solid ingredients which are not expressly set forth in claims and which change character of composition; however, claims, which define compositions by use of "comprising," are open ended and encompass compositions which have ingredients named in claims and also other ingredients.

Thus, clearly the instantly claimed Applicants' invention does not in any way positively omit a damping layer which functions at last party as part of the adhesive bond.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

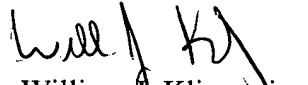
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2652

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.


William J. Klimowicz
Primary Examiner
Art Unit 2652

WJK
March 25, 2003